

SEQUENCE LISTING

<110> Procter & Gamble Company
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<120> Three Dimensional Coordinates of HPTPbeta

<130> 9045M2

<140> Not yet assigned

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<170> PatentIn version 3.2

<210> 1

<211> 6075

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

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gaa tac gag gag tta aaa gac gtg ggc cga aac cag tca tgt gac	5190
Glu Tyr Glu Glu Leu Lys Asp Val Gly Arg Asn Gln Ser Cys Asp	
1710 1715 1720	
att gca ctc ttg ccg gag aat aga ggg aaa aat cga tac aac aat	5235
Ile Ala Leu Leu Pro Glu Asn Arg Gly Lys Asn Arg Tyr Asn Asn	
1725 1730 1735	
ata ttg ccc tat gat gcc acg cga gtg aag ctc tcc aat gta gat	5280
Ile Leu Pro Tyr Asp Ala Thr Arg Val Lys Leu Ser Asn Val Asp	
1740 1745 1750	
gat gat cct tgc tct gac tac atc aat gcc agc tac atc cct ggc	5325
Asp Asp Pro Cys Ser Asp Tyr Ile Asn Ala Ser Tyr Ile Pro Gly	
1755 1760 1765	
aac aac ttc aga aga gaa tac att gtc act cag gga ccg ctt cct	5370

Asn Asn Phe Arg Arg	Glu Tyr Ile Val Thr	Gln Gly Pro Leu Pro	
1770	1775	1780	
ggc acc aag gat gac	ttc tgg aaa atg gtg	tgg gaa caa aac gtt	5415
Gly Thr Lys Asp Asp	Phe Trp Lys Met Val	Trp Glu Gln Asn Val	
1785	1790	1795	
cac aac atc gtc atg	gtg acc cag tgt gtt	gag aag ggc cga gta	5460
His Asn Ile Val Met	Val Thr Gln Cys Val	Glu Lys Gly Arg Val	
1800	1805	1810	
aag tgt gac cat tac	tgg cca gcg gac cag	gat tcc ctc tac tat	5505
Lys Cys Asp His Tyr	Trp Pro Ala Asp Gln	Asp Ser Leu Tyr Tyr	
1815	1820	1825	
ggg gac ctc atc ctg	cag atg ctc tca gag	tcc gtc ctg cct gag	5550
Gly Asp Leu Ile Leu	Gln Met Leu Ser Glu	Ser Val Leu Pro Glu	
1830	1835	1840	
tgg acc atc cgg gag	ttt aag ata tgc ggt	gag gaa cag ctt gat	5595
Trp Thr Ile Arg Glu	Phe Lys Ile Cys Gly	Glu Glu Gln Leu Asp	
1845	1850	1855	
gca cac aga ctc atc	cgc cac ttt cac tat	acg gtg tgg cca gac	5640
Ala His Arg Leu Ile	Arg His Phe His Tyr	Thr Val Trp Pro Asp	
1860	1865	1870	
cat gga gtc cca gaa	acc acc cag tct ctg	atc cag ttt gtg aga	5685
His Gly Val Pro Glu	Thr Thr Gln Ser Leu	Ile Gln Phe Val Arg	
1875	1880	1885	
act gtc agg gac tac	atc aac aga agc ccg	ggt gct ggg ccc act	5730
Thr Val Arg Asp Tyr	Ile Asn Arg Ser Pro	Gly Ala Gly Pro Thr	
1890	1895	1900	
gtg gtg cac tgc agt	gct ggt gtg ggt agg	act gga acc ttt att	5775
Val Val His Cys Ser	Ala Gly Val Gly Arg	Thr Gly Thr Phe Ile	
1905	1910	1915	
gca ttg gac cga atc	ctc cag cag tta gac	tcc aaa gac tct gtg	5820
Ala Leu Asp Arg Ile	Leu Gln Gln Leu Asp	Ser Lys Asp Ser Val	
1920	1925	1930	
gac att tat gga gca	gtg cac gac cta aga	ctt cac agg gtt cac	5865
Asp Ile Tyr Gly Ala	Val His Asp Leu Arg	Leu His Arg Val His	
1935	1940	1945	
atg gtc cag act gag	tgt cag tat gtc tac	cta cat cag tgt gta	5910
Met Val Gln Thr Glu	Cys Gln Tyr Val Tyr	Leu His Gln Cys Val	
1950	1955	1960	
aga gat gtc ctc aga	gca aga aag cta cgg	agt gaa caa gaa aac	5955
Arg Asp Val Leu Arg	Ala Arg Lys Leu Arg	Ser Glu Gln Glu Asn	
1965	1970	1975	
ccc ttg ttt cca atc	tat gaa aat gtg aat	cca gag tat cac aga	6000
Pro Leu Phe Pro Ile	Tyr Glu Asn Val Asn	Pro Glu Tyr His Arg	
1980	1985	1990	
gat cca gtc tat tca	agg cat tga gaatgtacct	gaagagctcc tggataaaaa	6054
Asp Pro Val Tyr Ser	Arg His		

1995

ttattcactg tgtgatttgt t

6075

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Glu Ser Lys Ala Ser Ser His Ser Val Ser Ile Gln Trp Arg Ile Leu
35 40 45

Gly Ser Pro Cys Asn Phe Ser Leu Ile Tyr Ser Ser Asp Thr Leu Gly
50 55 60

Ala Ala Leu Cys Pro Thr Phe Arg Ile Asp Asn Thr Thr Tyr Gly Cys
65 70 75 80

Asn Leu Gln Asp Leu Gln Ala Gly Thr Ile Tyr Asn Phe Lys Ile Ile
85 90 95

Ser Leu Asp Glu Glu Arg Thr Val Val Leu Gln Thr Asp Pro Leu Pro
100 105 110

Pro Ala Arg Phe Gly Val Ser Lys Glu Lys Thr Thr Ser Thr Gly Leu
115 120 125

His Val Trp Trp Thr Pro Ser Ser Gly Lys Val Thr Ser Tyr Glu Val
130 135 140

Gln Leu Phe Asp Glu Asn Asn Gln Lys Ile Gln Gly Val Gln Ile Gln
145 150 155 160

Glu Ser Thr Ser Trp Asn Glu Tyr Thr Phe Phe Asn Leu Thr Ala Gly
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Ser Lys Tyr Asn Ile Ala Ile Thr Ala Val Ser Gly Gly Lys Arg Ser
180 185 190

Phe Ser Val Tyr Thr Asn Gly Ser Thr Val Pro Ser Pro Val Lys Asp

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Gly	Ser	Gly	Asn	Val	Glu	Arg	Tyr	Arg	Leu	Met	Leu	Met	Asp	Lys	Gly
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Ile	Leu	Val	His	Gly	Gly	Val	Val	Asp	Lys	His	Ala	Thr	Ser	Tyr	Ala
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Phe	His	Gly	Leu	Ser	Pro	Gly	Tyr	Leu	Tyr	Asn	Leu	Thr	Val	Met	Thr
			260					265					270		
Glu	Ala	Ala	Gly	Leu	Gln	Asn	Tyr	Arg	Trp	Lys	Leu	Val	Arg	Thr	Ala
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Pro	Met	Glu	Val	Ser	Asn	Leu	Lys	Val	Thr	Asn	Asp	Gly	Ser	Leu	Thr
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Ser	Leu	Lys	Val	Lys	Trp	Gln	Arg	Pro	Pro	Gly	Asn	Val	Asp	Ser	Tyr
305					310					315					320
Asn	Ile	Thr	Leu	Ser	His	Lys	Gly	Thr	Ile	Lys	Glu	Ser	Arg	Val	Leu
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Ala	Pro	Trp	Ile	Thr	Glu	Thr	His	Phe	Lys	Glu	Leu	Val	Pro	Gly	Arg
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Leu	Tyr	Gln	Val	Thr	Val	Ser	Cys	Val	Ser	Gly	Glu	Leu	Ser	Ala	Gln
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Pro	Ala	Gly	Asp	Trp	Glu	Gln	Tyr	Arg	Ile	Leu	Leu	Phe	Asn	Asp	Ser
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Met	Asp	Asp	Thr	Gly	Leu	Val	Pro	Gly	Arg	Gln	Tyr	Glu	Val	Glu	Val
		435					440					445			

Ile Val Glu Ser Gly Asn Leu Lys Asn Ser Glu Arg Cys Gln Gly Arg
450 455 460

Thr Val Pro Leu Ala Val Leu Gln Leu Arg Val Lys His Ala Asn Glu
465 470 475 480

Thr Ser Leu Ser Ile Met Trp Gln Thr Pro Val Ala Glu Trp Glu Lys
485 490 495

Tyr Ile Ile Ser Leu Ala Asp Arg Asp Leu Leu Leu Ile His Lys Ser
500 505 510

Leu Ser Lys Asp Ala Lys Glu Phe Thr Phe Thr Asp Leu Val Pro Gly
515 520 525

Arg Lys Tyr Met Ala Thr Val Thr Ser Ile Ser Gly Asp Leu Lys Asn
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Ser Ser Ser Val Lys Gly Arg Thr Val Pro Ala Gln Val Thr Asp Leu
545 550 555 560

His Val Ala Asn Gln Gly Met Thr Ser Ser Leu Phe Thr Asn Trp Thr
565 570 575

Gln Ala Gln Gly Asp Val Glu Phe Tyr Gln Val Leu Leu Ile His Glu
580 585 590

Asn Val Val Ile Lys Asn Glu Ser Ile Ser Ser Glu Thr Ser Arg Tyr
595 600 605

Ser Phe His Ser Leu Lys Ser Gly Ser Leu Tyr Ser Val Val Val Thr
610 615 620

Thr Val Ser Gly Gly Ile Ser Ser Arg Gln Val Val Val Glu Gly Arg
625 630 635 640

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Asn Asp Tyr Leu Ser Val Ser Trp Leu Val Ala Pro Gly Asp Val Asp
660 665 670

Asn Tyr Glu Val Thr Leu Ser His Asp Gly Lys Val Val Gln Ser Leu
675 680 685

Val Ile Ala Lys Ser Val Arg Glu Cys Ser Phe Ser Ser Leu Thr Pro
690 695 700

Gly Arg Leu Tyr Thr Val Thr Ile Thr Thr Arg Ser Gly Lys Tyr Glu
705 710 715 720

Asn His Ser Phe Ser Gln Glu Arg Thr Val Pro Asp Lys Val Gln Gly
725 730 735

Val Ser Val Ser Asn Ser Ala Arg Ser Asp Tyr Leu Arg Val Ser Trp
740 745 750

Val His Ala Thr Gly Asp Phe Asp His Tyr Glu Val Thr Ile Lys Asn
755 760 765

Lys Asn Asn Phe Ile Gln Thr Lys Ser Ile Pro Lys Ser Glu Asn Glu
770 775 780

Cys Val Phe Val Gln Leu Val Pro Gly Arg Leu Tyr Ser Val Thr Val
785 790 795 800

Thr Thr Lys Ser Gly Gln Tyr Glu Ala Asn Glu Gln Gly Asn Gly Arg
805 810 815

Thr Ile Pro Glu Pro Val Lys Asp Leu Thr Leu Arg Asn Arg Ser Thr
820 825 830

Glu Asp Leu His Val Thr Trp Ser Gly Ala Asn Gly Asp Val Asp Gln
835 840 845

Tyr Glu Ile Gln Leu Leu Phe Asn Asp Met Lys Val Phe Pro Pro Phe
850 855 860

His Leu Val Asn Thr Ala Thr Glu Tyr Arg Phe Thr Ser Leu Thr Pro
865 870 875 880

Gly Arg Gln Tyr Lys Ile Leu Val Leu Thr Ile Ser Gly Asp Val Gln
885 890 895

Gln Ser Ala Phe Ile Glu Gly Phe Thr Val Pro Ser Ala Val Lys Asn
900 905 910

Ile His Ile Ser Pro Asn Gly Ala Thr Asp Ser Leu Thr Val Asn Trp
915 920 925

Thr Pro Gly Gly Gly Asp Val Asp Ser Tyr Thr Val Ser Ala Phe Arg
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His Ser Gln Lys Val Asp Ser Gln Thr Ile Pro Lys His Val Phe Glu
 945 950 955 960

His Thr Phe His Arg Leu Glu Ala Gly Glu Gln Tyr Gln Ile Met Ile
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Ala Ser Val Ser Gly Ser Leu Lys Asn Gln Ile Asn Val Val Gly Arg
 980 985 990

Thr Val Pro Ala Ser Val Gln Gly Val Ile Ala Asp Asn Ala Tyr Ser
 995 1000 1005

Ser Tyr Ser Leu Ile Val Ser Trp Gln Lys Ala Ala Gly Val Ala
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Glu Arg Tyr Asp Ile Leu Leu Leu Thr Glu Asn Gly Ile Leu Leu
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Arg Asn Thr Ser Glu Pro Ala Thr Thr Lys Gln His Lys Phe Glu
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Asp Leu Thr Pro Gly Lys Lys Tyr Lys Ile Gln Ile Leu Thr Val
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Ser Gly Gly Leu Phe Ser Lys Glu Ala Gln Thr Glu Gly Arg Thr
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Val Pro Ala Ala Val Thr Asp Leu Arg Ile Thr Glu Asn Ser Thr
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Pro Gly Arg Lys Tyr Val Leu Trp Val Val Thr His Ser Gly Asp						1240						1245			
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Pro Ser Leu Met Ser Phe Ala Asp Ile Ala Asn Thr Ser Leu Ala						1270						1275			
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Asn	Cys	Ser	Trp	Phe	Ser	Asp	Thr	Asn	Gly	Ala	Val	Lys	Tyr	Phe
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Thr	Val	Val	Val	Arg	Glu	Ala	Asp	Gly	Ser	Asp	Glu	Leu	Lys	Pro
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Ala	Glu	Asn	Pro	Asn	Ser	Asn	Ser	Lys	Ser	Phe	Asn	Ile	Lys	Leu
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Ser	Glu	Ser	Val	Leu	Pro	Glu	Trp	Thr	Ile	Arg	Glu	Phe	Lys	Ile
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Cys Gly Glu Glu Gln Leu Asp Ala His Arg Leu Ile Arg His Phe
1850 1855 1860

His Tyr Thr Val Trp Pro Asp His Gly Val Pro Glu Thr Thr Gln
1865 1870 1875

Ser Leu Ile Gln Phe Val Arg Thr Val Arg Asp Tyr Ile Asn Arg
1880 1885 1890

Ser Pro Gly Ala Gly Pro Thr Val Val His Cys Ser Ala Gly Val
1895 1900 1905

Gly Arg Thr Gly Thr Phe Ile Ala Leu Asp Arg Ile Leu Gln Gln
1910 1915 1920

Leu Asp Ser Lys Asp Ser Val Asp Ile Tyr Gly Ala Val His Asp
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Leu Arg Leu His Arg Val His Met Val Gln Thr Glu Cys Gln Tyr
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Val Tyr Leu His Gln Cys Val Arg Asp Val Leu Arg Ala Arg Lys
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Lys Thr Ser Cys Pro Ile Lys Ile Asn Gln Phe Glu Gly His Phe Met
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165 170 175

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180 185 190

Leu Asp Ala His Arg Leu Ile Arg His Phe His Tyr Thr Val Trp Pro
195 200 205

Asp His Gly Val Pro Glu Thr Thr Gln Ser Leu Ile Gln Phe Val Arg
210 215 220

Thr Val Arg Asp Tyr Ile Asn Arg Ser Pro Gly Ala Gly Pro Thr Val
225 230 235 240

Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Thr Phe Ile Ala Leu
245 250 255

Asp Arg Ile Leu Gln Gln Leu Asp Ser Lys Asp Ser Val Asp Ile Tyr
260 265 270

Gly Ala Val His Asp Leu Arg Leu His Arg Val His Met Val Gln Thr
275 280 285

Glu Cys Gln Tyr Val Tyr Leu His Gln Cys Val Arg Asp Val Leu Arg
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48

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Lys Thr Ser Cys 20 Pro Ile Lys Ile Asn Gln Phe Glu Gly His Phe Met 30	
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Lys Leu Gln Ala Asp Ser Asn Tyr Leu Leu Ser Lys Glu Tyr Glu Glu 35 40 45	
tta aaa gac gtg ggc cga aac cag tca tgt gac att gca ctc ttg ccg	192
Leu Lys Asp Val Gly Arg Asn Gln Ser Cys Asp Ile Ala Leu Leu Pro 50 55 60	
gag aat aga ggg aaa aat cga tac aac aat ata ttg ccc tat gat gcc	240
Glu Asn Arg Gly Lys Asn Arg Tyr Asn Asn Ile Leu Pro Tyr Asp Ala 65 70 75 80	
acg cga gtg aag ctc tcc aat gta gat gat gat cct tgc tct gac tac	288
Thr Arg Val Lys 85 Leu Ser Asn Val Asp Asp Asp Pro Cys Ser Asp Tyr 95	
atc aat gcc agc tac atc cct ggc aac aac ttc aga aga gaa tac att	336
Ile Asn Ala Ser Tyr Ile Pro Gly Asn Asn Phe Arg Arg Glu Tyr Ile 100 105 110	
gtc act cag gga ccg ctt cct ggc acc aag gat gac ttc tgg aaa atg	384
Val Thr Gln Gly Pro Leu Pro Gly Thr Lys Asp Asp Phe Trp Lys Met 115 120 125	
gtg tgg gaa caa aac gtt cac aac atc gtc atg gtg acc cag tgt gtt	432
Val Trp Glu Gln Asn Val His Asn Ile Val Met Val Thr Gln Cys Val 130 135 140	
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Glu Lys Gly Arg Val Lys Cys Asp His Tyr Trp Pro Ala Asp Gln Asp 145 150 155 160	
tcc ctc tac tat ggg gac ctc atc ctg cag atg ctc tca gag tcc gtc	528
Ser Leu Tyr Tyr Gly Asp Leu Ile Leu Gln Met Leu Ser Glu Ser Val 165 170 175	
ctg cct gag tgg acc atc cgg gag ttt aag ata tgc ggt gag gaa cag	576
Leu Pro Glu Trp Thr Ile Arg Glu Phe Lys Ile Cys Gly Glu Glu Gln 180 185 190	
ctt gat gca cac aga ctc atc cgc cac ttt cac tat acg gtg tgg cca	624
Leu Asp Ala His Arg Leu Ile Arg His Phe His Tyr Thr Val Trp Pro 195 200 205	
gac cat gga gtc cca gaa acc acc cag tct ctg atc cag ttt gtg aga	672
Asp His Gly Val Pro Glu Thr Thr Gln Ser Leu Ile Gln Phe Val Arg 210 215 220	
act gtc agg gac tac atc aac aga agc ccg ggt gct ggg ccc act gtg	720
Thr Val Arg Asp Tyr Ile Asn Arg Ser Pro Gly Ala Gly Pro Thr Val 225 230 235 240	
gtg cac tgc agt gct ggt gtg ggt agg act gga acc ttt att gca ttg	768
Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Thr Phe Ile Ala Leu 245 250 255	
gac cga atc ctc cag cag tta gac tcc aaa gac tct gtg gac att tat	816

Asp Arg Ile Leu Gln Gln Leu Asp Ser Lys Asp Ser Val Asp Ile Tyr	
260 265 270	
gga gca gtg cac gac cta aga ctt cac agg gtt cac atg gtc cag act	864
Gly Ala Val His Asp Leu Arg Leu His Arg Val His Met Val Gln Thr	
275 280 285	
gag tgt cag tat gtc tac cta cat cag tgt gta aga gat gtc ctc aga	912
Glu Cys Gln Tyr Val Tyr Leu His Gln Cys Val Arg Asp Val Leu Arg	
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Glu Asn Arg Gly Lys Asn Arg Tyr Asn Asn Ile Leu Pro Tyr Asp Ala	
65 70 75 80	
Thr Arg Val Lys Leu Ser Asn Val Asp Asp Asp Pro Cys Ser Asp Tyr	
85 90 95	
Ile Asn Ala Ser Tyr Ile Pro Gly Asn Asn Phe Arg Arg Glu Tyr Ile	
100 105 110	
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Val Trp Glu Gln Asn Val His Asn Ile Val Met Val Thr Gln Cys Val	
130 135 140	
Glu Lys Gly Arg Val Lys Cys Asp His Tyr Trp Pro Ala Asp Gln Asp	
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Ser Leu Tyr Tyr Gly Asp Leu Ile Leu Gln Met Leu Ser Glu Ser Val
 165 170 175

Leu Pro Glu Trp Thr Ile Arg Glu Phe Lys Ile Cys Gly Glu Glu Gln
 180 185 190

Leu Asp Ala His Arg Leu Ile Arg His Phe His Tyr Thr Val Trp Pro
 195 200 205

Asp His Gly Val Pro Glu Thr Thr Gln Ser Leu Ile Gln Phe Val Arg
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Thr Val Arg Asp Tyr Ile Asn Arg Ser Pro Gly Ala Gly Pro Thr Val
 225 230 235 240

Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Thr Phe Ile Ala Leu
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Asp Arg Ile Leu Gln Gln Leu Asp Ser Lys Asp Ser Val Asp Ile Tyr
 260 265 270

Gly Ala Val His Asp Leu Arg Leu His Arg Val His Met Val Gln Thr
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Ala Arg Lys Leu Arg Ser Glu Gln
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 35 40 45

Glu Leu Lys Asp Val Gly Arg Asn Gln Ser Cys Asp Ile Ala Leu Leu
 50 55 60

Pro Glu Asn Arg Gly Lys Asn Arg Tyr Asn Asn Ile Leu Pro Tyr Asp
 65 70 75 80

Ala Thr Arg Val Lys Leu Ser Asn Val Asp Asp Asp Pro Cys Ser Asp
 85 90 95

Tyr Ile Asn Ala Ser Tyr Ile Pro Gly Asn Asn Phe Arg Arg Glu Tyr
 100 105 110

Ile Val Thr Gln Gly Pro Leu Pro Gly Thr Lys Asp Asp Phe Trp Lys
 115 120 125

Met Val Trp Glu Gln Asn Val His Asn Ile Val Met Val Thr Gln Cys
 130 135 140

Val Glu Lys Gly Arg Val Lys Cys Asp His Tyr Trp Pro Ala Asp Gln
 145 150 155 160

Asp Ser Leu Tyr Tyr Gly Asp Leu Ile Leu Gln Met Leu Ser Glu Ser
 165 170 175

Val Leu Pro Glu Trp Thr Ile Arg Glu Phe Lys Ile Cys Gly Glu Glu
 180 185 190

Gln Leu Asp Ala His Arg Leu Ile Arg His Phe His Tyr Thr Val Trp
 195 200 205

Pro Asp His Gly Val Pro Glu Thr Thr Gln Ser Leu Ile Gln Phe Val
 210 215 220

Arg Thr Val Arg Asp Tyr Ile Asn Arg Ser Pro Gly Ala Gly Pro Thr
 225 230 235 240

Val Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Thr Phe Ile Ala
 245 250 255

Leu Asp Arg Ile Leu Gln Gln Leu Asp Ser Lys Asp Ser Val Asp Ile
 260 265 270

Tyr Gly Ala Val His Asp Leu Arg Leu His Arg Val His Met Val Gln
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290

295

300

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